REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-66 were originally presented. Claims 1, 9, 12, 23, 40, 50, 55, 56, 59, 63, and 65 are amended herein. Claim 22 has been canceled and claim 67 has been added so that claims 1-21 and 23-67 are presently pending. Claims 1, 12, 40, 59, 63, 65, and 67 are in independent form.

In the Office Action mailed March 13, 2006, the Examiner states that "the disclosure is objected to because of the following informalities: There is no description of the drawn [*sic*] shown as Fig. 1. A brief description of the figure must be included in the detailed description of the invention." (Office Action, p. 2, paragraph 2). Applicants have amended the specification to include a brief description of the figure as follows: "**FIG. 1** shows the relationship of Total UV to UV-C dose." Accordingly, Applicants respectfully request this objection be withdrawn.

In the Office Action, the Examiner objected to claims 9, 13, 50, 55, and 56 as being unclear because of the inclusion of "acrylonitril, cycloaliphatic acid and acrylate groups in the Markush group." (Office Action, p. 2, paragraph 3). Applicants have amended claims 9, 50, 55, and 56 to delete the recitation of sodium 1-allyloxy-2-hydroylpropyl sulfonate and acrylonitrile from the Markush groups.

Regarding claim 13, Applicants submit that the inclusion of cylcloaliphatic, acid, acrylonitril, and acrylate groups in the Markush group does not render the claim unclear. This is due to the fact that claim 13 recites an "acrylate monomer contain[ing] at least one *functional group* selected from the group consisting of" the above listed groups. The functional group is not limited to only those groups falling within the definition of an acrylate monomer. For example, the Specification states that "[f]unctionality can be built in to the tackifier resin by choosing an acrylate monomer containing at least one functional group. The functional group can be selected from hydroxyl, cycloaliphatic, acid, epoxide, amide, acrylonitril and acrylate groups." (Specification, p. 5, lines 26-29). Thus, the functional group on the acrylate monomer can be a cycloaliphatic group, an acid group, an acrylonitrile group, etc. In light of the foregoing, Applicants submit that

claims 9, 13, 50, 55, and 56 are not unclear, and respectfully request this objection be withdrawn.

In the Office Action, the Examiner rejects independent claim 63 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner states that "[t]he instant claim recites the transitional phrase 'consisting essentially of' and includes at least one acrylic polymer and at least one tackifier resin. The composition is essentially open ended to other acrylic polymers and tackifiers and thus, remains unclear as to which ingredients do not materially affect the basic and novel characteristics of the claimed composition." (Office Action, p. 3, lines 4-7).

Applicants submit that independent claim 63 is not indefinite under 35 U.S.C. § 112, second paragraph. MPEP § 2173.02 states that "[t]he test for definiteness under 35 U.S.C. 112, second paragraph, is whether 'those skilled in the art would understand what is claimed when the claim is read in light of the specification.'" (*quoting* Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1576 (Fed. Cir. 1986)). MPEP § 2173.02 provides an example, saying that "[i]f one skilled in the art is able to ascertain . . . the meaning of the terms 'suitable liquid' and 'solids of a filtering agent' in light of the specification, 35 U.S.C. 112, second paragraph, is satisfied."

In the present case, the acrylic polymers and tackifier resins useful in the invention are clearly spelled out in the specification, such that one skilled in the art would readily be able to ascertain the scope of the claim when read in light of the specification. (*See, e.g.*, Specification, p. 12, line 17, to p. 15, line 25). Thus, even though the limiting transitional phrase "consisting essentially of" is coupled with the open ended phrase "at least one," the scope of the claim is not rendered unascertainable when the claim is read in light of the specification. Accordingly, Applicants respectfully request the rejection of independent claim 63 as being indefinite under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Office Action, the Examiner states that claims 1 and 50-53 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 48 and 51-54 of co-pending Application No. 10/780,996. The

Examiner also states that claims 1-66 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-67 of co-pending Application No. 10/780,987 in view of U.S. Patent No. 5,623,011 to Bernard. Applicants have included herewith terminal disclaimers to obviate the obviousness-type double patenting rejections over co-pending Application Serial Nos. 10/780,996 and 10/780,987. Therefore, Applicants submit that the obviousness-type double patenting rejections have been overcome, and withdrawal of the same is respectfully requested.

In the Office Action, the Examiner rejects independent claims 1, 59, and 63 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,783,850 to Takizawa et al. (hereinafter, Takizawa). For the reasons given below, Applicants submit that independent claims 1, 59, and 63 are not anticipated by, nor obvious over, the prior art, including Takizawa.

MPEP § 2131 states that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Further, in order to render a claim obvious a reference must, *inter alia*, teach or suggest all of the claim limitations. (MPEP § 2143.03). Thus, whether a rejection is predicated on anticipation or obviousness, the reference must disclose, either expressly or inherently, every element recited in the claim. For the reasons given below, Applicants submit that Takizawa does not disclose, either expressly or inherently, every element recited in independent claims 1, 59, and 63.

Applicants have amended independent claims 1, 59, and 63 to recite that the "residual monomer concentration of said tackifier resin is less than about 600 ppm by weight based on the weight of said tackifier resin." Support for these amendments can be found in original claim 22. In the Office Action, the Examiner states that, because Takizawa teaches polymerizing to a substantially 100% degree of polymerization, then there is an inherently low residual monomer concentration. (Office Action, p. 10, lines 1-2). However, Applicants submit that Takizawa neither expressly nor inherently discloses a tackifier with a residual monomer concentration of less than about 600 ppm. Takizawa's disclosed method of "polymerizing the partial polymerizate to a degree of polymerization of substantially 100%" cannot reduce monomer concentration to the

level recited in claims 1, 59, and 63, as amended. (Takizawa, col. 15, lines 66-67). In fact, Inventive Example 1 of the present application shows that Applicants "further polymerized" the tackifier resin to substantially 100%, but could still not achieve a residual monomer concentration of less than about 600 ppm using this technique alone. In particular, Inventive Example 1 describes the post-addition of additional initiator to achieve further polymerization after the main polymerization step. (See, p. 25, lines 7-9). As discussed in further detail below, this "further polymerization" described in Inventive Example 1 achieved degrees of polymerization greater than 99.99%. However, even these high degrees of polymerization did not produce a tackifier resin having a residual monomer concentration of less than 600 ppm. The table provided below summarizes relevant portions of Table 3 from Inventive Example 1.

Initial Monomers	**Styrene-Acrylic Tackifier Formulation I**		**Styrene-Acrylic Tackifier Formulation II**	
Styrene (wt%)	61.2		24.9	
2-EHA[1] (wt%)	30.7		44.2	
Acrylic Acid (wt%)	1.7		1.5	
Residual Monomers	**Before Steaming**	**After Steaming**	**Before Steaming**	**After Steaming**
Styrene (ppm)	34	29	20	<10
2-EHA[1] (ppm)	476	12	990	40
Acrylic Acid (ppm)	218	110	-	134
Total Resid. Mon. (ppm)	728	151	1,010	<184
Degree of Polymerization	99.9993%	-	99.9989%	

Applicants submit that polymerization degrees of 99.9993% and 99.9989%, seen in the last line of the table provided above, are both substantially 100%. However, at this degree of polymerization the residual monomer concentration for both formulations was still greater than 600 ppm. Only after at least one additional step was taken (i.e., steaming), were Applicants able to achieve the desired low residual monomer concentration. Thus, because, for example, Takizawa's disclosure of "further polymerizing...to a degree of polymerization of substantially 100%" does not expressly or inherently disclose a tackifier resin with a residual monomer concentration of less

than about 600 ppm, not all elements recited in independent claims 1, 59, and 63, as amended, are disclosed. Therefore, Takizawa does not anticipate nor render obvious independent claims 1, 59, and 63. Accordingly, Applicants respectfully request that the rejection of independent claims 1, 59, and 63 as being anticipated by or, in the alternative, as being obvious over Takizawa be withdrawn.

In the Office Action, the Examiner rejects independent claims 1, 59, and 63 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 4,912,169 to Whitmire et al. (hereinafter, Whitmire). For the reasons given below, Applicants submit that independent claims 1, 59, and 63 are not anticipated by, nor obvious over, the prior art, including Whitmire.

As discussed above, whether a rejection is predicated on anticipation or obviousness, the reference must disclose, either expressly or inherently, every element of the claim. Applicants submit that Whitmire does not disclose, either expressly or inherently, every element of independent claims 1, 59, and 63, as amended.

In the Office Action, the Examiner states because the polymer of Whitmire is "separated from the medium by filtration and isolated, a reasonable basis exists to believe that any unreacted monomer present would inherently be eliminated to afford an additive with low residual monomer." As discussed above, Applicants have amended independent claims 1, 59, and 63 to recite that the "residual monomer concentration of said tackifier resin is less than about 600 ppm by weight based on the weight of said tackifier resin." Nowhere does Whitmire expressly disclose a residual monomer concentration of less than about 600 ppm.

Furthermore, Whitmire does not inherently disclose a residual monomer concentration of less than about 600 ppm. In order for a reference to disclose an element of a claim by inherency, the reference or extrinsic evidence "must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities." (MPEP § 2112(IV), emphasis added). To support the contention of inherency, the Examiner appears to be relying on the fact that, in Examples I-XXI of Whitmire, the "batch was . . . filtered, and

the polymeric product was recovered." (Whitmire, col. 4, lines 66-68). However, Applicants submit that this bare declaration by Whitmore cannot support an assertion that the resulting product *necessarily* has a residual monomer concentration of less than about 600 ppm. This is due to the fact that Whitmire gives absolutely no specific information regarding its filtering process. It is entirely possible that Whitmire employed filters having a pore size that would filter out any solvent, and yet still retain a residual monomer concentration in the final polymeric product of greater than 600 ppm. While the converse may also be true, inherency "may not be established by probabilities or possibilities." (MPEP § 2112(IV)). Accordingly, because, for example, the process described by Whitmire would not *necessarily* result in a product having a residual monomer concentration of less than about 600 ppm, Whitmire does not disclose, either expressly or inherently, every element recited in independent claims 1, 59, and 63, as amended. Therefore, Whitmore does not anticipate nor render obvious independent claims 1, 59, and 63, as amended. Thus, Applicants respectfully request that the rejection of independent claims 1, 59, and 63 as being anticipated by or, in the alternative, as being obvious over Whitmore be withdrawn.

In the Office Action, the Examiner rejects independent claims 1, 59, and 63 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,028,484 to Martin et al. (hereinafter, Martin). For the reasons given below, Applicants submit that independent claims 1, 59, and 63, as amended, are not anticipated by, nor obvious over, the prior art, including Martin.

As discussed above, whether a rejection is predicated on anticipation or obviousness, the reference must disclose, either expressly or inherently, every element of the claim. Applicants submit that Martin does not disclose, either expressly or inherently, every element of independent claims 1, 59, and 63, as amended.

In the Office Action, the Examiner states that, because "the tackifying resin in working example in column 10 is prepared by anionic polymerization and purified by precipitation and filtration, a reasonable basis exits [*sic*] to believe that any unreacted monomer present would inherently be eliminated to afford a product with low residual monomer." As noted above, Applicants have amended claims 1, 59, and 63 to recite

that the "residual monomer concentration of said tackifier resin is less than about 600 ppm by weight based on the weight of said tackifier resin." Nowhere does Martin expressly disclose a tackifier resin having a residual monomer concentration of less than about 600 ppm.

Furthermore, as discussed above, in order for a reference to disclose an element of a claim by inherency, the reference or extrinsic evidence "must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities." (MPEP § 2112(IV), emphasis added). The fact that Martin employs both precipitation and filtration as a means of purifying its polymer product does not *necessarily* disclose a residual monomer concentration of less than about 600 ppm.

First, the mere filtering of a polymer product does not necessarily remove enough residual monomer content to result in a tackifier resin having a residual monomer content of less than about 600 ppm. As with Whitmire above, Martin gives absolutely no indication as to what type of filter is employed, nor what pore size is used. The only statement Martin makes is that the product was "then filtered to remove the salt." (Martin, col. 11, line 2). However, it is entirely possible that the filters employed had a pore size that would filter out any salt, and yet still retain a residual monomer concentration in the final polymeric product of greater than 600 ppm. Thus, filtering the polymer product will not *necessarily* disclose a polymer having a residual monomer concentration of less than about 600 ppm.

Second, the mere fact that Martin employs precipitation to purify the polymer does not necessarily disclose a tackifier resin having a residual monomer concentration of less than about 600 ppm. Martin states that only a 95% conversion was achieved in the example in column 10, on which the Examiner is relying. This leaves a residual monomer concentration of 5%, or 50,000 ppm. This concentration is *much* greater than about 600 ppm. Thus, purification by precipitation will not *necessarily* disclose a polymer having a residual monomer concentration of less than about 600 ppm, as is recited in independent claims 1, 59, and 63, as amended. Accordingly, Martin does not

disclose, either expressly or inherently, all of the limitations recited in independent claims 1, 59, and 63. Therefore, Applicants respectfully request that the rejection of independent claims 1, 59, and 63 as being anticipated by or, in the alternative, as being obvious over Martin be withdrawn.

In light of the foregoing, Applicants submit that independent claims 1, 59, and 63 should now be in condition for allowance. Additionally, while claims 2-11, 13-21, 23-39, 44-58, and 66, which depend from independent claim 1, claims 60-62, which depend from independent claim 59, and claim 64, which depends from independent claim 63, recite additional patentable features, these claims should also be in condition for allowance because they depend from patentable independent claims.

In the Office Action, claims 12, 40-43, and 65 were only rejected under the judicially created doctrine of obviousness-type double patenting rejection discussed above. In a telephone conference between Applicants' representative and the Examiner on August 23, 2006, the Examiner indicated that these claims would be allowable if rewritten in independent form and the obviousness-type double patenting rejection was overcome. Accordingly, Applicants have rewritten claims 12, 40, and 65 in independent form. Also, as discussed above, Applicants have included terminal disclaimers herewith to obviate the obviousness-type double patenting rejections. Thus, Applicants respectfully submit that these claims are now in condition for allowance. Additionally, while claims 41-43, which depend from independent claim 40, contain additional patentable features, these claims should also be in condition for allowance because they depend from a patentable independent claim.

Independent claim 67 has been added to further define the present invention. Independent claim 67 recites an adhesive composition within the scope of independent claim 1, but instead of an acrylate monomer, claim 67 recites that the tackifier also comprises at least one other monomer selected from the group consisting of sodium 1-allyloxy-2-hydroylpropyl sulfonate and acrylonitrile. Claim 67 is submitted to be patentable over the prior art references of record.

In summary, Applicants believe the application to be in condition for allowance. Accordingly, the Examiner is respectfully requested to reconsider the rejection(s), enter the above amendment, remove all rejections, and pass the application to issuance.

Respectfully submitted,

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Date